



FIGURE 2A

Comparison of AMP Deaminase Polypeptides From Corn, Rice, Soybean, and Wheat (SEQ ID Nos:14, 16, 18, and 20) and *Arabidopsis thaliana*

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SEQ ID NO:14      -----EPTADEIE
SEQ ID NO:16      MPKTMPSVLLTKWND--IGSDPLPGKASQNDTKVPSTNMIRSQATSLHGAQHPVADILRKEPEHETFSRINITAVETPSPDEIE
SEQ ID NO:18      LDTTYLHANGTGPEGKIPFEPLPNHVNANGEQMAITPS-MIRSHSVSGDLHGVPDPDIAADILRKEPEHETFTRLRITPLEAPSPDEIE
SEQ ID NO:20      -----
gi 7484807      M-----ICL-----EVPTSDEVE

SEQ ID NO:14      VFKILXKCLELRDSYLFREEVAPWEKEVINDDPCTPKPNPNPFTYVPEPKSEHVQTVGVIHVYADKCTESIYPVADATFTFDLHYIL
SEQ ID NO:16      AYKVLQKCLELREKYMFRREEVAPWEKEIITDPPSTPKPNPNPFYVEQQTKEHHFEMVDGVHVPYPNKDAKERIYPVADATFTFTDMHYIL
SEQ ID NO:18      AYVVLQECLEMRKRYVFRFAVAPWDKEVISDPSTPKPNPDPLYIPEGNSDHYFEMQDGVIRVYPPDRDAKEELFPVADATFTFTDLHLL
SEQ ID NO:20      -----R-C-----
gi 7484807      AYKCLQECLELRKRYVFOETVAPWEKEVISDPSTPKPNTEPFAHYPPQKSDHCFEMQDGVVHVVFANKDAKEDLFPVADATFTFDLHHVL

SEQ ID NO:14      RVTAGNTRITVCHNRNLNLEHKFKFHLMLNADREFLAQKTAHPHDFYNVRKVDTHVHVSACMNQKHLRLRFIKSKLRKEPDEVVIFRDGTY
SEQ ID NO:16      RVLAAGDIRITVYKRLNLEQKFNHLMLNADRELLAQKAAPHRDFYNVRKVDTHVHVSACMNQKHLRLRFIKSKLRKEPDEVVIFRDGTY
SEQ ID NO:18      RVIAAGNIRITLCHRLNLEQKFNHLMLNADREFLAQKSAPHRDFYNVRKVDTHVHVSACMNQKHLRLRFIKSKLRKEPDEVVIFRDGTY
SEQ ID NO:20      -----KF-----
gi 7484807      KVIAAGNIRITLCHRLNLEQKFNHLMLNADKEFLAQKSAPHRDFYNVRKVDTHVHVSACMNQKHLRLRFIKSKLRKEPDEVVIFRDGTY

SEQ ID NO:14      MTLKEVFESLDLTGYDLNVDLLDVHADKSTFHRFDKFNLYNPNPCGQSRLREIFLKQDNLIQGRFLAELTKQVFSDSLASKYQMAEYRISI
SEQ ID NO:16      LTLKEVFESLDLTGYDLNVDLLDVHADKSTFHRFDKFNLYNPNPCGQSRLREIFLKQDNLIQGRFLAELTKQVFSDSLASKYQMAEYRISI
SEQ ID NO:18      LTLKEVFESLDLTGYDLNVDLLDVHADKSTFHRFDKFNLYNPNPCGQSRLREIFLKQDNLIQGRFLGELTKQVFSDSLASKYQMAEYRISI
SEQ ID NO:20      -----FSDNLASKYQMAEYRISI
gi 7484807      LTLKEVFESLDLTGYDLNVDLLDVHADKSTFHRFDKFNLYNPNPCGQSRLREIFLKQDNLIQGRFLGELTKQVFSDSLASKYQMAEYRISI

SEQ ID NO:14      YGRKQSEWDQLASWIVNNELHSGNVVWLVIQIPRLYNYKEMGIVTSFQNLNDNIFVPLFEVTIDPASHPQLHVFLKQVVGDLVDDESKP
SEQ ID NO:16      YGRKKSEWDQMASWIVNNELYSENVVWLVIQIPRIYNYVREMGTINSFQNLNDNIFLPLFEVTIDPASHPQLHVFLKQVVGDLVDDESKP
SEQ ID NO:18      YGRKQSEWDQLASWIVNNELYSENVVWLVIQIPRLYNYKEMGIVTSFQNLNDNIFIPLFVETVNDSPHQLHVFLKQVVGDLVDDESKP
SEQ ID NO:20      YGRKQSEWDQLASWIVNNELYSENVVWLVIQIPRLYNYQQMGIYTSFQNLNDNIFLPLFEVTIDPASHPQLHVFLKQVVGDLVDDESKP
gi 7484807      YGRKMSEWDQLASWIVNNELYSENVVWLVIQIPRLYNYKDMGIYTSFQNLNDNIFIPLFVETVNDSPHQLHVFLKQVVGDLVDDESKP
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FIGURE 2B

SEQ ID NO:14	ERRPTKHMPTPEQWTVNFNPAFSYYAYCYANLYTLNKLRESKGWTTIKFRPHAGEAGVDHLAATFLCHNISHGINLRKSPVLQYLYY
SEQ ID NO:16	ERRPTKHMPTPEQWTVNFNPAFSYYAYCYANLYTLNKLRESKGWTTIKLRPHCGEAGDIDHLAAAFLTSHNIAHGVNLKKSPVLQYLYY
SEQ ID NO:18	ERRPTKHMPTPEQWTVNFNPAFSYYAYCYANLYTLNKLRESKGWTTIKFRPHSGEAGDIDHLAATFLTAHNIAGINLKKSPVLQYLYY
SEQ ID NO:20	ERRPTKHMPTPEQWTVNFNPAFSYYAYCYANLYTLNKLRESKGWTTIKFRPHAGEAGVDHLAATFLCHSISHGINLRKSPVLQYLYY
gi 7484807	ERRPTKHMPTPAQWTFNPAFSYYAYCYANLYVLNKLRESKGWTTITLPHSGEAGDIDHLAATFLTCHSIAHGINLRKSPVLQYLYY
SEQ ID NO:14	LGQIGLAMSPLSNNSLFLDYHRNPFTFFQRLNVSLSTDDPLQIHLTKPEPLVEEYSIAASLWKLSSCDLCEIARNSVYQSGFSHALKAH
SEQ ID NO:16	LAQIGLAMSPLSNNSLFLDYHRNPFTFFLRLNVSLSTDDPLQIHLTKPEPLVEEYSIAASLWKLSSCDLCEIARNSVYQSGFSHRLKSH
SEQ ID NO:18	LAQIGLAMSPLSNNSLFLDYHRNPFPFRLRLNVSLSTDDPLQIHLTKPEPLVEEY-----
SEQ ID NO:20	LGQIGLAMSPLSNNSLFLDYHRNPFPFQRLNVSLSTDDPLQIHLTKPEPLVEEYSIAASLWKLSSCDLCEIARNSVYQSGFSHALKAH
gi 7484807	LAQIGLAMSPLSNNSLFLDYHRNPFPVFLRLNVSLSTDDPLQIHLTKPEPLVEEYSIAASVWKLSSCDLCEIARNSVYQSGFSHALKSH
SEQ ID NO:14	WIGKNYFKRGPAGNDIHRNTNVPHIRVQPREMIWRNEMKLVSDNEILIPDELDL
SEQ ID NO:16	WIGRNYKRGHDGNDIHQTNVPHIRIEFRHTIWKEEMELIHLRN-VDIPEEIDR
SEQ ID NO:18	-----
SEQ ID NO:20	WIGKNYKRGPSGNDIHRNTNVPITIRIEFRDLIWRDEMQVLVNLNNVIL-PDEVDQ
gi 7484807	WIGKDYKRGPDGNDIHKTNPVPHIRVEFRDVTWNE-----IYL---FFTQVNFSL



FIGURE 3A

Comparison of Adenosine Deaminase Polypeptides From Soybean (SEQ ID NO:22) and *E. coli*

SEQ ID NO:22 gi 2506342	MCGENMKQFLKELPKCEHHIHIEGSLSPALLFELAKTNNIALPDSAADASFQSPQELSRYERFTSLNDFLHYYYIGMSVLINPADYESL MIDT-----TLPLTDIHRHLDGNIRPQTILELGRQYNISLPAQSLETLIPHVQVIANE----PDLVSFLTCLDVGKVLASLDACRRV
SEQ ID NO:22 gi 2506342	AYEYLTKANRDGVHHAEIFFDPPQ-AHTERGIAYNTVVEGLSAGLKRAEKDFGITSKLILCFLRHLSEAEDAKTTYQEA VSLGHFSNGTVAA AFENIEDAARHGLHYVELRFS PGYMAHAHQLPVAGVVEAVIDGVREGCRTFGVQAKLIGIMSRTFGEAACQQEELEA--FLAH--RDQITA
SEQ ID NO:22 gi 2506342	IGLDSSEVGFPPPEIFREIYESAETKGIHRTAHAGEEGDTSYISRALDICKVERIDHGIRLAEDENLLKRVAEQGTMLTVCPLSNVRLRCV LDLAGDELGFPGLSHFNRRARDAGWHITVHAGEAAGPESIWQATRELGAERIGHGVKAIEDRALMDFLAEQQIGIESCLTSNIQTSTV
SEQ ID NO:22 gi 2506342	ENVGQLPIRKFLDGGIKFSINSDDPAYFGGVYILDNYLAVQEA FGLNLKEWKYIATSAIEGSWCDDERKAVLLSKVDACAKKYEALL AELAAHPLKTFLEHGIRASINTDDPGVQGVDDIIHEYTVAAPAAGLSREQIRQAQINGLEMAFLSAEEKRALREKVAA-----K